CLAIMS:

1.   A method of displaying a graphical element comprising the steps of:

    filtering the graphical element with a low pass filter to generate a multi-level value per pixel at an intended final display resolution; and

    using the multi-level values as alpha blend values for the graphical element in a subsequent compositing stage.

10   2.   The method of displaying a graphical element of claim 1 wherein the multi-level values are written into a display buffer where the multi-level values are used as alpha blend values when contents of the display buffer are composited with other graphics and video images.

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3.   The method of displaying a graphical element of claim 1 wherein the graphical element is initially rendered at a higher resolution than the intended final display resolution.

20   4.   The method of displaying a graphical element of claim 3 wherein the graphical element is initially rendered at four times the resolution of the intended final display resolution in a horizontal axis.

25   5.   The method of displaying a graphical element of claim 3 wherein the graphical element is initially rendered at four times the resolution of the intended final display resolution in a vertical axis.

30   6.   The method of displaying a graphical element of claim 1 wherein the low pass filter is a box filter.

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7.   The method of displaying a graphical element of claim 1 wherein the graphical element includes text, and the display buffer is defined to have a constant foreground color that is consistent

5   with a desired foreground color of the text.

8.   The method of displaying a graphical element of claim 1 wherein the graphical element includes graphics, and the display buffer is defined to have a constant foreground color that is

10   consistent with a desired foreground color of the graphics.

9.   The method of displaying a graphical element of claim 1 wherein the alpha blend values include CLUT indexes, each CLUT index is associated with a CLUT entry, and each CLUT entry contains

15   a CLUT alpha blend value.

10.   The method of displaying a graphical element of claim 1 wherein the alpha blend values are used to form alpha portions of pixels having a color portion and an alpha portion.

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11.   The method of displaying a graphical element of claim 10 wherein the pixels having color portions and alpha portions are in an alphaRGB (4,4,4,4) format.

12.   The method of displaying a graphical element of claim 1 wherein the graphical element has a plurality of foreground colors, which are filtered using a low pass filter.

13.   The method of displaying a graphical element of claim 12

30   wherein the filtered plurality of foreground colors are used as

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color portions of pixels having a color portion and an alpha
portion.

14. The method of displaying a graphical element of claim 13
5   wherein the pixels having a color portion and an alpha portion are
in an alphaRGB format.

15. The method of displaying a graphical element of claim 13
wherein the pixels having a color portion and an alpha portion are
10 in an alphaYUV format.

16. The method of displaying a graphical element of claim 12
wherein the filtered plurality of foreground colors are used as
color choices in a CLUT format.

15 17. The method of displaying a graphical element of claim 1
wherein an outline of the graphical element, including all colors
other than background color, is filtered using the low pass filter,
wherein the graphical element has a plurality of foreground colors.

20 18. The method of displaying a graphical element of claim 17
wherein the filtered outline is used as an alpha per pixel value.

19. The method of displaying a graphical element of claim 18
25 wherein the filtered outline is used as the alpha per pixel value
in a direct color format, the direct color format including an
alphaRGB format.

20. The method of displaying a graphical element of claim 18
30 wherein the filtered outline is used as a choice of an alpha value
per CLUT entry in a CLUT format.

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21. The method of displaying a graphical element of claim 2 wherein the step of using the multi-level values as the alpha blend values for the graphical element in a subsequent compositing stage

5 comprises compositing the display buffer with other graphics and video contents while blending the display buffer with all layers behind it using alpha per pixel values.

22. The method of displaying a graphical element of claim 2

10 wherein the opacity of the graphical element may be varied by specifying the alpha value of the display buffer.

23. A graphics display system for displaying a graphical element comprising:

15 a low pass filter for filtering the graphical element to generate multi-level values, one multi-level value per each pixel, at an intended final display resolution;

a display buffer for storing the multi-level values; and

a display engine for compositing the multi-level values

20 with graphics images.

24. The graphics display system for displaying a graphical element of claim 23 wherein the multi-level values are used as alpha blend values for blending with the graphics images.

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25. The graphics display system for displaying a graphical element of claim 23 wherein the graphical element is initially rendered at a higher resolution than the intended final display resolution.

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26.   The graphics display system of claim 23 wherein the low pass filter is a box filter.

27.   The graphics display system of claim 23 wherein the graphical element includes text, and the display buffer is defined to have a constant foreground color that is consistent with a desired foreground color of the text.

28.   The graphics display system of claim 23 wherein the graphical element includes graphics, and the display buffer is defined to have a constant foreground color that is consistent with a desired foreground color of the graphics.

29.   The graphics display system of claim 24 wherein the alpha blend values include CLUT indexes, each CLUT index is associated with a CLUT entry, and each CLUT entry contains a CLUT alpha blend value.

30.   The graphics display system of claim 24 wherein the alpha blend values are used to form alpha portions of pixels having a color portion and an alpha portion.

31.   The graphics display system of claim 30 wherein the pixels having color portions and alpha portions are in an alphaRGB (4,4,4,4) format.

32.   The graphics display system of claim 23 wherein the graphical element has a plurality of foreground colors, which are filtered using a low pass filter.

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33. The graphics display system of claim 32 wherein the filtered plurality of foreground colors are used as color portions of pixels having a color portion and an alpha portion.

5   34. The graphics display system of claim 33 wherein the pixels having a color portion and an alpha portion are in an alphaRGB format.

35. The graphics display system of claim 33 wherein the
10 pixels having a color portion and an alpha portion are in an alphaYUV format.

36. The graphics display system of claim 32 wherein the filtered plurality of foreground colors are used as color choices
15 in a CLUT format.

37. The graphics display system of claim 23 wherein an outline of the graphical element, including all colors other than background color, is filtered using the low pass filter, wherein
20 the graphical element has a plurality of foreground colors.

38. The graphics display system of claim 37 wherein the filtered outline is used as an alpha per pixel value.

25   39. The graphics display system of claim 38 wherein the filtered outline is used as the alpha per pixel value in a direct color format, the direct color format including an alphaRGB format.

40. The graphics display system of claim 38 wherein the filtered outline is used as a choice of an alpha value per CLUT entry in a CLUT format.

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41. The graphics display system of claim 23 wherein the translucency of the graphical element is varied by specifying the alpha value of the display buffer.

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